

Application No.: 10/521,893
Amendment and Response dated September 6, 2007
Reply to Office Action of May 7, 2007
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Remarks/Arguments:

Introduction

Claims 1-20 are pending. Claims 3-12 are withdrawn. Claims 16 and 19 contain allowable subject matter if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1 and 13 have been amended to advance prosecution on the merits. It is respectfully submitted that the discussion of the relevant prior art hereafter clarifies the difference between the squeegee unit according to the invention and the squeegee arrangement out of the prior art. To emphasize the difference between the prior art and the invention in claim 1 the wording "travel limiting means" is replaced with the wording "a stop". By introducing the wording "further" it is emphasized that the stop is an extra component. The stop is shown in figure 4 with reference number 20 and in figure 8 with reference number 128. The stop limits the movement of the squeegee over a relatively short distance from the working position in the direction away from the squeegee holder. At the end of the movement the squeegee abuts against the stop.

Additionally, the wording "only" is inserted in claim 1, to further emphasize the difference between the prior art and the invention. Herewith, the function of the stop is more precisely defined as limiting the travel of the squeegee edge over a certain distance from the working position.

Claim 1 and 13 are further amended in that the original wording "blade squeegee" is replaced by the wording "squeegee". The international application is originally filed in Dutch. The wording "squeegee" is a better translation of the Dutch term "strijkrakel". So these amendments relate to a correction of a translation error. The description is also amended to remedy this translation error.

Thus, no new matter is introduced with these amendments. Entry of the claim amendments is respectfully requested.

Section 102 Rejections

Claims 1, 13-15, 17 and 18 are rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 4,232,601 to Mitter. Applicants respectfully traverse

Mitter discloses a particular squeegee arrangement for a rotary screen-printing device. The squeegee arrangement provides a solution for a particular problem which is caused by a variable pressure which is exerted by the ink. In a screen-printing machine the ink has to be forced through the screen and on to the work piece to be printed. The occurring variable pressure also exerts a reaction force upon the squeegee blade. The occurring variable pressures cause an undesired displacement of the squeegee edge. It is Mitter's purpose to provide a squeegee arrangement to maintain the squeegee blade at its proper operating position.

Therefore, Mitter discloses a squeegee arrangement comprising a squeegee holder (4) which is tiltably mounted on shaft (41) and resiliently restrained from such tilting by springs (42). A gas-filled envelope (30) forms a gas cushion. The gas cushion (30) exerts downward pressure to urge the squeegee holder together with a squeegee member (5) towards the inner surface of a screen (1) of a printing machine. Thus, the springs (42) keep the squeegee holder (4) abutted against the gas cushion (30). The screen (1) is in contact with the free end of the squeegee member (5). In the region of its free end the squeegee member (5) is supported by an elastically yieldable spring element (6). Due to the particular geometry of this spring element (6), the squeegee member (5) will always be properly positioned against the screen (1) and any unevenness will be readily accommodated because the squeegee blade (5) can flex freely and readily. With this flexible squeegee blade (5) and the supporting spring element (6) Mitter proposes a solution to deal with the varying pressures over a relatively wide range exerted by the ink.

However, the squeegee arrangement of Mitter differs from the squeegee device according to the invention and is susceptible to the problem mentioned in the present patent application.

In paragraph two of the present application a prior art squeegee unit is described. The squeegee arrangement of Mitter corresponds with this description. The Mitter squeegee arrangement has a squeegee blade (5) which is clamped in the squeegee holder (4) at the opposite longitudinal side from the squeegee edge. The squeegee blade (5) is resilient and is responsible for positioning this squeegee edge (65) and transmitting force from the squeegee holder (4) to the squeegee edge. The squeegee edge of the Mitter squeegee arrangement is pressed on to the inner site of the cylindrical screen with a defined pre-stress which is provided by the gas cushion (30) and the springs (42).

The squeegee unit according to the invention differs from Mitter's squeegee arrangement in that it further comprises, *inter alia*, a stop. The stop defines the stroke of the squeegee. At the end of the stroke the squeegee abuts against the stop. Herewith, the stop prevents the cylindrical screen from being excessively deformed or damaged by the squeegee edge. The stop is illustrated in the description in figure 4 with reference number 20 and in figure 8 with reference number 128. This difference makes the invention novel with respect of the squeegee arrangement out of the prior art, i.e. Mitter.

Therefore, reconsideration and withdrawal of the rejection of claims 1, 13-15, 17 and 18 are rejected under 35 U.S.C. §102(b) are respectfully requested.

Section 103 Rejections

Claims 2 and 20 are rejected under 35 U.S.C. §103(a) as allegedly being obvious over Mitter. Applicants respectfully traverse.

Like the described prior art in the present patent application the squeegee arrangement disclosed in Mitter has the drawback that in a situation in which the squeegee member (5) is pressed on to the inner side of the cylindrical screen (1) and the counter pressure disappears, the squeegee edge can excessively deform the cylindrical screen and thereby damage it.

Mitter's squeegee arrangement does not have a stop. A problem occurs when the counter pressure disappears. Due to the pressure, which is exerted by the gas cushion (30) this

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will cause the squeegee edge (5) to move in a direction away from the squeegee holder (1). There is nothing provided to limit the travel of the squeegee edge (5), which may result in a damage to the thin screen (1). From the disclosed squeegee arrangement of Mitter it appears that there is no awareness for this problem.

One of ordinary skill in the art who is confronted with this problem further knows the doctor-blade system for a screen printing machine disclosed in US 3,878,780 of Lotte. The disclosed doctor-blade system comprises a flexible intermediate member which is interposed between a pneumatic bladder and a blade-holder. Herewith, the deflection to which the blade-holder is subjected can be compensated for by the elastic deformation of the intermediate member, with the result that the free edge of the doctor blade can be applied against the screen with a constant pressure. In fact Lotte discloses a similar squeegee arrangement as Mitter. Also this doctor-blade system has the same problem as the squeegee arrangement disclosed by Mitter, and is affected by risk of damaging the screen. Also from the disclosure of Lotte there appears no indication of awareness of the problem which is dealt with in the present application.

Thus, from the art of record it appears that one of ordinary skill in the art has not tried to solve the problem of damage to the screen by adapting the squeegee unit. One of ordinary skill in the art does not find the solution according to the invention for the above mentioned problem in the prior art. The prior art shows solutions to improve the control over exerted forces on the blade edge. However, the cited art does not provide a solution to prevent damages to the screen, when the counter pressure disappears. Therefore, the cited art fails to teach or suggest the squeegee unit according to the present invention is novel and involves an inventive step.

Thus, it is respectfully submitted that the amended claim 1 is patentably distinct as prior art fails to teach or suggest the combination of features of independent claim 1. Therefore, reconsideration and withdrawal of the rejections under section 103(a) are respectfully requested.

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Summary

Therefore, Applicants respectfully submit that independent claim 1, and all claims dependent therefrom, are patentably distinct. Re-entry and allowance of withdrawn claims 3-13 are also respectfully requested. This application is believed to be in condition for allowance. Favorable action thereon is therefore respectfully solicited.

Should the Examiner have any questions or comments concerning the above, the Examiner is respectfully invited to contact the undersigned attorney at the telephone number given below.

The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 08-2461. Such authorization includes authorization to charge fees for extensions of time, if any, under 37 C.F.R. § 1.17 and also should be treated as a constructive petition for an extension of time in this reply or any future reply pursuant to 37 C.F.R. § 1.136.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John S. Sopko", is written over a horizontal line.

John S. Sopko
Registration No.: 41,321
Attorney for Applicants

HOFFMANN & BARON, LLP
6900 Jericho Turnpike
Syosset, New York 11791
(973) 331-1700